

OpenHydro: Bay of Fundy

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Jeremy Poste | OpenHydro Technology Canada | 4th November 2014

Agenda

1. OpenHydro Technology
2. Cape Sharp Tidal
3. Demonstration Array
4. Staged Development
5. Retained Benefits

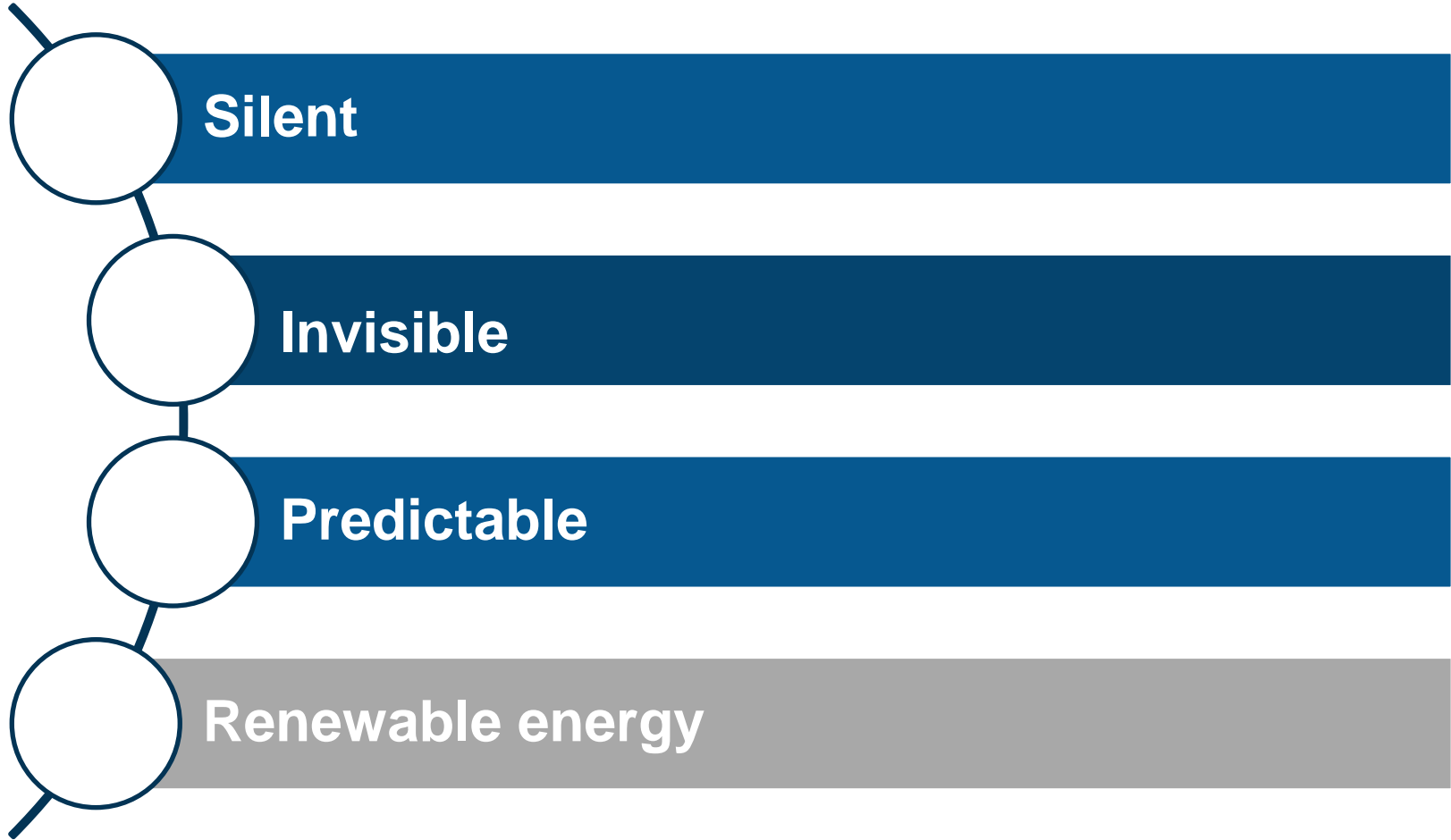
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OpenHydro Technology



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Cape Sharp Tidal



CAPE SHARP TIDAL



2015
2 turbine array
4MW
Grid-connected
Local manufacturing

2020+
Commercial scale farm
300MW
Supplying over 75,000 homes
Up to 950 jobs

Cape Sharp Tidal

Local Team

- A project team of ten people, locally hired, is committed to deliver the 4MW demonstration array in 2015 and to address all development steps to develop future commercial farms.



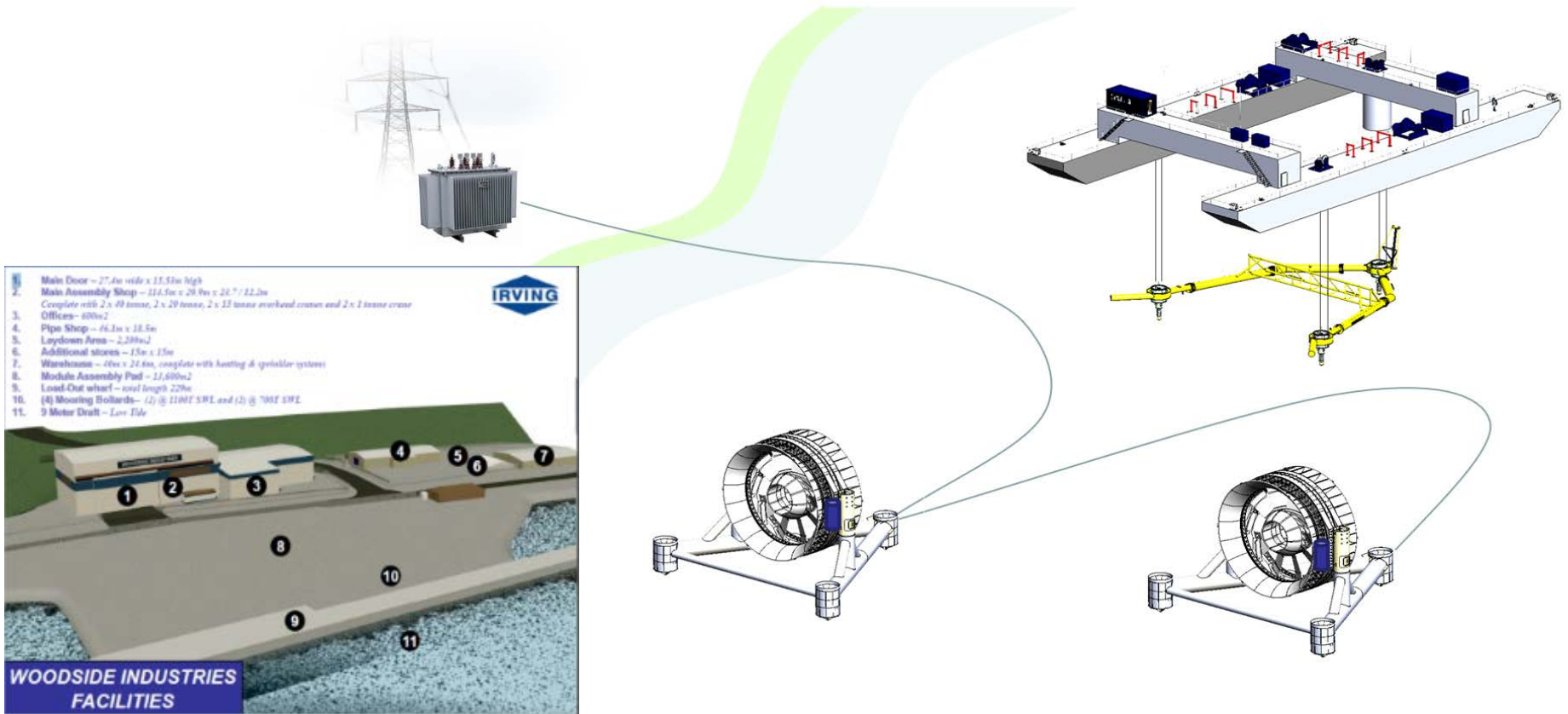
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Demonstration Array

Cape Sharp Tidal | Bay of Fundy

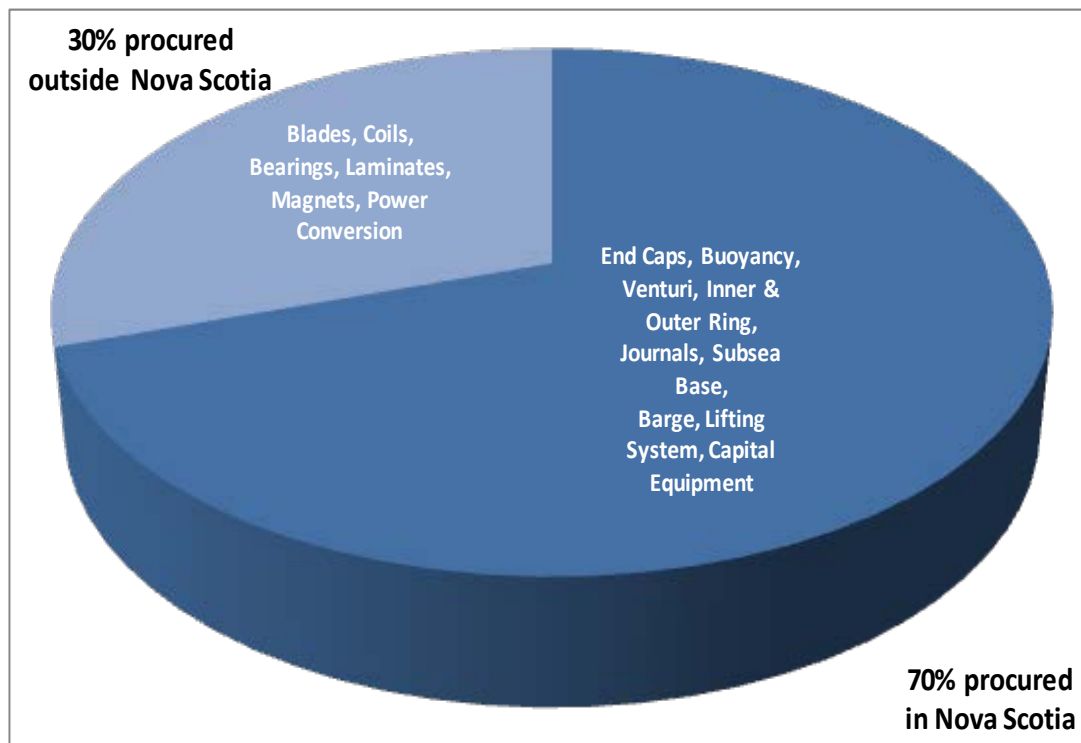
- The turbines will be built locally in Dartmouth, Nova Scotia in partnership with Irving Shipbuilding.



Demonstration Array

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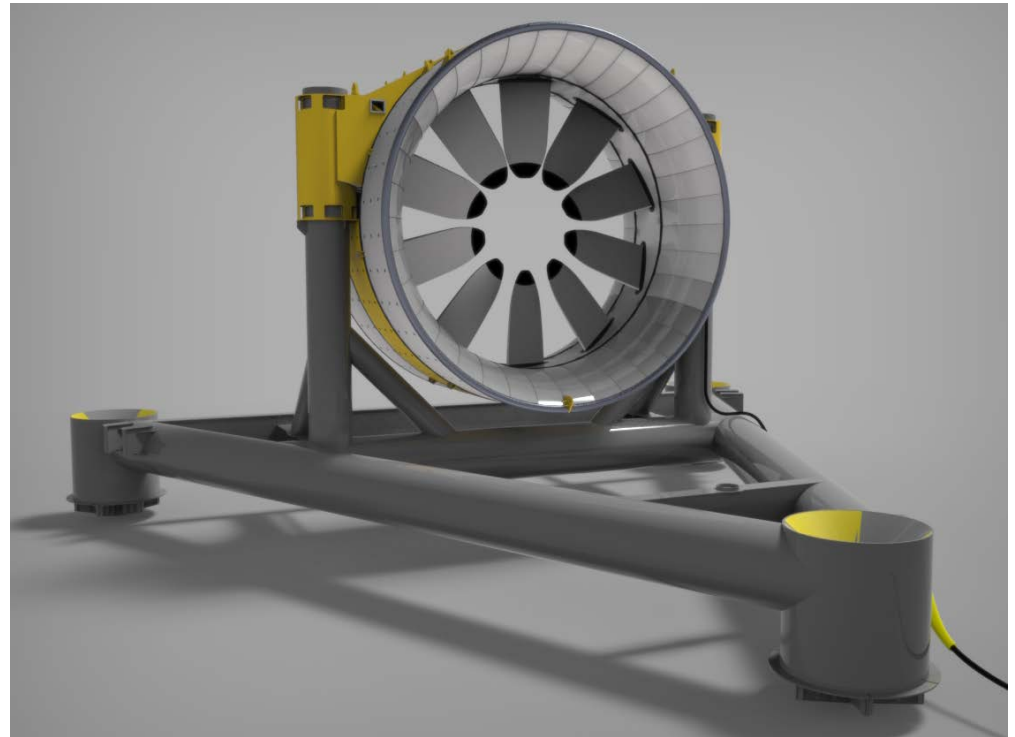
- Long lead items ordered with a view to deploy the first turbine within summer 2015.
- A strong focus of the team is to embed local industry in the project.
- Cape Sharp Tidal intention is that 70% of the array investment will be made in Nova Scotia.
- Barge design has been performed in Dartmouth and fabrication contract will be awarded shortly.



Demonstration Array

Turbine Design – Simplicity and robustness

- Standardization : OpenHydro has implemented a strategy for a standard system design that can be deployed across all our sites.
- Performance optimization: Evolution of design is expected to optimize the performance and reduce costs



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Staged Development

Cape Sharp Tidal | Bay of Fundy

- In parallel of the delivery of the 4MW demonstration array, **Cape Sharp Tidal** is also focused on the phased development of a commercial farm of 300MW in line with Nova Scotia's marine energy strategy.
 - Phase 1 (2015): 4MW demonstration array at the FORCE test centre.
 - Phase 2 (2017): Installation of additional 12MW utilising the cable capacity at FORCE
 - Phase 3 (2019): Increase array production capacity to 50MW subject to regulatory approvals
 - Phase 4 (2020+): Full 300 MW commercial project.

Staged Development

Cape Sharp Tidal | Bay of Fundy

- Each phase will follow a staged approach embedding all stakeholders in order to lead to final site selection :
 - Resource Assessment, Accessibility & Geophysical study
 - Grid Connection Feasibility Study
 - Regulatory Approvals & Permits
 - Environmental Assessment & Approvals
 - Industrialisation Strategy
- Several studies have already started and additional ADCPs have been deployed this summer

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Retained Benefits

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- Reduction in emissions
- Academic research
- Enhanced environmental monitoring and site understanding
- Long term sustainable jobs through the establishment of a new local industry
- Knowledge and experience gained by our partners will enable them to have a competitive advantage in the delivery of future projects in Canada and overseas.



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